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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

PATEL, NITIN

ART UNIT PAPER NUMBER

2673

e

DATE MAILED: 02/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/955,084

Applicant(s)

PARK ET AL.

Examiner

Nitin Patel

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-13 is/are allowed.
- 6) ☒ Claim(s) 14 and 15 is/are rejected.
- 7) ☒ Claim(s) 16-18 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 14-15 is rejected under 35 U.S.C. 102(e) as being anticipated by Motomura et al., (U.S. patent No. 6,111,559).

As per claim 14, Motomura shows a liquid crystal display (in Abstract) having a liquid crystal panel having a plurality of pixels (in fig.2 element 10); a backlight arranged in the liquid crystal panel (element 8 and In col.3 lines 44-47); a means for generating a gate clock signal and a plurality of control signals and a means for generating a control signal and a means for reducing flicker in the liquid crystal display (in Fig.3and In col.2 lines 1-22 and In col.4 lines 26-55 and lines 62-67 to Col.5 lines 10-40).

As per claim 15, Motomura shows reducing the flicker decreases the brightness of the backlight (in col.1 lines 59-67 to Col.2 lines 1-7).

Allowable Subject Matter

3. Claims 1-13 is allowed.
4. The prior art fails to teach or suggest a timing control circuit for generating a gate clock signal and a plurality of control signals sensing whether or not data to be

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displayed in the liquid crystal panel is toggled and generating a control signal for controlling a brightness of the backlight according to sensed results;

a gray scale voltage generating circuit for generating a plurality of gray scale voltages corresponding to the data to be displayed in the liquid crystal panel in response to the gate clock signal;

a gate driving circuit for scanning the pixels of the liquid crystal panel a row at a time in order in response to the gate clock signal and a source driving circuit for generating liquid crystal driving voltages corresponding to the data to be displayed in the liquid crystal panel in response to the gray scale voltages and the control signals and outputting generated liquid crystal driving voltages to the liquid crystal panel every scanning as claimed in claim 1.

The prior art fails to teach or suggest a method for reducing the flickers in a LCD device having the step of:

inputting data into a timing controller of the LCD device;

detecting whether or not inputted data is toggled;

counting the number of toggled data in a line to be displayed in the LCD device;

counting the number of toggled lines in a frame to be displayed in the LCD

device; and

controlling brightness of the LCD device according to the number of toggled lines as claimed in claim 7.

5. Claims 16-18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art fails to teach or suggest a flicker sensing portion; a first counter in electrical communication with the flicker sensing portion; a second comparator in electrical communication with the first counter; a second counter in electrical communication with the second comparator and a third comparator in electrical communication with the second counter as claimed in claim 16.

The prior art fails to teach or suggest a toggle detector capable of receiving a color signal; an adder in electrical communication with the toggle detector and a first comparator in electrical communication with the toggle detector as claimed in claim 17.

The prior art fails to teach or suggest the third comparator outputs a control signal to the backlight to control a brightness of the backlight as claimed in claim 18.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nitin Patel whose telephone number is 703-308-7024. The examiner can normally be reached on 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin H Shalwala can be reached on 703-305-4938. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

NP
February 9, 2004

A handwritten signature in black ink, appearing to read 'Vijay Shankar', with a long horizontal flourish extending to the right.

**VIJAY SHANKAR
PRIMARY EXAMINER**